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LSI CORPORATION
1621 BARBER LANE
MS: D-106
MILPITAS, CA 95035

EXAMINER	
RAO, ANAND SHASHIKANT	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/624,253	WINGER ET AL.	
	Examiner	Art Unit	
	Andy S. Rao	2621	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 02 August 2007.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-24 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-24 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/2/07 has been entered.

2. Applicant's arguments with respect to claims 1-24 as filed on 6/29/07 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-2, 4-5, 9-11, 13-15, 18, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Au.

Au discloses a method for decoding a bitstream (Au: figures 5-6), comprising the steps of: (A) generating a first signal and a second signal by parsing (Au: column 11, lines 5-10) a common slice in said bitstream (Au: column 8, lines 35-40); (B) generating a third signal by entropy decoding said first signal (Au: column 11, lines 10-25); and (C) generating a video signal by combining said second signal and said third signal (Au: column 10, lines 60-67), as in claim 1.

Regarding claim 2, Au further discloses the step of: accepting said common slice containing a plurality of macroblocks (Au: column 8, lines 35-45) encoded in a plurality of modes (Au: column 8, lines 55-65), as in the claim.

Regarding claim 4, Au discloses terminating said entropy decoding by setting any one of a plurality of predetermined values as a last value for said entropy decoding (Au: column 5, lines 10-15), as in the claim.

Regarding claim 5, Au discloses comparing an offset value to a range value (Au: column 14, lines 25-61), as in the claim.

Au discloses an apparatus (Au: figure 3), comprising: a parser configured to generate a first signal and a second signal by parsing (Au: column 11, lines 5-10) a common slice in said bitstream (Au: column 8, lines 35-40); a decoder configured to generate a third signal by entropy

decoding said first signal (Au: column 11, lines 10-25); and a circuit configured to generate a video signal by combining said second signal and said third signal (Au: column 10, lines 60-67), as in claim 9.

Regarding claims 10-11, Au further discloses wherein said entropy decoding discloses wherein said arithmetic decoding comprises a context-based adaptive binary arithmetic coding (Au: column 11, lines 10-25), as in the claims.

Au discloses an apparatus (Au: figure 3), comprising: means for generating a first signal and a second signal by parsing (Au: column 11, lines 5-10) a common slice in said bitstream (Au: column 8, lines 35-40); means for generating a third signal by entropy decoding said first signal (Au: column 11, lines 10-25); and means for generating a video signal by combining said second signal and said third signal (Au: column 9, lines 40-50), as in claim 13.

Au discloses a method for encoding a bitstream (Au: column 11, lines 10-32), comprising the steps of: (A) generating a first signal and a second signal by parsing (Au: column 8, lines 65-67; column 9, lines 1-10) a common slice in said bitstream (Au: column 8, lines 35-40); generating a third signal by entropy encoding said first signal (Au: column 10, lines 5-20); and generating a video signal by combining said second signal and said third signal (Au: column 10, lines 60-67), as in claim 14.

Regarding claim 15, Au further discloses generating said common slice (Au: column 8, lines 35-45) in a plurality of modes (Au: column 8, lines 55-65), as in the claim.

Regarding claim 18, Au discloses terminating said entropy encoding by setting any one of a plurality of predetermined values as a last value for said entropy encoding (Au: column 5, lines 10-15), as in the claim.

Regarding claim 20, Au discloses the steps of: generating a fourth signal and a fifth signal by parsing (Au: column 11, lines 5-10) a common slice in said bitstream (Au: column 8, lines 35-40); generating a sixth signal by entropy decoding said fourth signal (Au: column 11, lines 10-25); and generating a copy of said video signal by combining said fifth signal and said sixth signal (Au: column 10, lines 60-67), as in claim 20.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 3, 6-8, 12, 16-17, 19, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Au in view of Marpe et al., (hereinafter referred to as "Marpe").

Au discloses a method for decoding a bitstream (Au: figures 5-6), comprising the steps of: (A) generating a first signal and a second signal by parsing (Au: column 11, lines 5-10) a common slice in said bitstream (Au: column 8, lines 35-40); (B) generating a third signal by entropy decoding said first signal (Au: column 11, lines 10-25); and (C) generating a video

signal by combining said second signal and said third signal (Au: column 10, lines 60-67), as in claim 3. However, Au fails to disclose renormalizing said entropy decoding as in the claim. Marpe discloses a entropy-decoding method (Marpe: column 17, lines 12-35) which includes the use an initialization step (Marpe: column 6, lines 52-68; column 7, lines 1-20) to initialize (i.e. renormalize) symbols of CABAC methods (Marpe: column 13, lines 35-60) in order to achieve a bit rate savings over straightforward equi-probable symbol distribution. Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the Marpe teaching of initialization into the Au method in order to achieve additional bit rate savings in the Au method. The Au method, now incorporating Marpe's initialization step, has all of the features of claim 3.

Au discloses a method for decoding a bitstream (Au: figures 5-6), comprising the steps of: (A) generating a first signal and a second signal by parsing (Au: column 11, lines 5-10) a common slice in said bitstream (Au: column 8, lines 35-40); (B) generating a third signal by entropy decoding said first signal (Au: column 11, lines 10-25); and (C) generating a video signal by combining said second signal and said third signal (Au: column 10, lines 60-67), and comparing an offset value to a range value (Au: column 14, lines 25-61), as in the claim 6. However, Au fails to disclose renormalizing said entropy decoding as in the claim. Marpe discloses a entropy-decoding method (Marpe: column 17, lines 12-35) which includes the use an initialization step (Marpe: column 6, lines 52-68; column 7, lines 1-20) to initialize (i.e. renormalize) symbols of CABAC methods (Marpe: column 13, lines 35-60) in order to achieve a bit rate savings over straightforward equi-probable symbol distribution. Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art at the time of the invention

invention to incorporate the Marpe teaching of initialization into the Au method in order to achieve additional bit rate savings in the Au method. The Au method, now incorporating Marpe's initialization step, has all of the features of claim 6.

Au discloses a method for decoding a bitstream (Au: figures 5-6), comprising the steps of: (A) generating a first signal and a second signal by parsing (Au: column 11, lines 5-10) a common slice in said bitstream (Au: column 8, lines 35-40); (B) generating a third signal by entropy decoding said first signal (Au: column 11, lines 10-25); and (C) generating a video signal by combining said second signal and said third signal (Au: column 10, lines 60-67), as in claims 7-8. However, Au fails to disclose the use of demodulating said second signal wherein the demodulating is pulse code demodulating, as in the claim. Marpe discloses the use of pulse code modulation and corollary demodulation in the decoder (Marpe: column 10, lines 1-17) in order to accurately represent anomalous picture content without significant data expansion. Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the Marpe teaching of pulse code modulation and demodulation into the Au method in order to accurately represent anomalous picture content without significant data expansion. The Au method, now incorporating the Marpe teaching of pulse code modification and demodulation, has all of features of claims 7-8.

Au discloses an apparatus (Au: figure 3), comprising: a parser configured to generate a first signal and a second signal by parsing (Au: column 11, lines 5-10) a common slice in said bitstream (Au: column 8, lines 35-40); a decoder configured to generate a third signal by entropy decoding said first signal (Au: column 11, lines 10-25); and a circuit configured to generate a video signal by combining said second signal and said third signal (Au: column 10, lines 60-67),

as in claim 12. However, Au fails to disclose the use of a demodulator for demodulating said second signal wherein the demodulator is configured for pulse code demodulating, as in the claim. Marpe discloses the use of pulse code modulation and corollary demodulation in the decoder (Marpe: column 10, lines 1-17) in order to accurately represent anomalous picture content without significant data expansion. Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the Marpe teaching of pulse code modulation and demodulation into the Au apparatus in order to accurately represent anomalous picture content without significant data expansion. The Au apparatus, now incorporating the Marpe teaching of pulse code modification and demodulation, has all of features of claim 12.

Au discloses a method for encoding a bitstream (Au: column 11, lines 10-32), comprising the steps of: (A) generating a first signal and a second signal by parsing (Au: column 8, lines 65-67; column 9, lines 1-10) a common slice in said bitstream (Au: column 8, lines 35-40); generating a third signal by entropy encoding said first signal (Au: column 10, lines 5-20); and generating a video signal by combining said second signal and said third signal (Au: column 10, lines 60-67), as in claim 16. However, Au fails to disclose renormalizing said entropy decoding as in the claim. Marpe discloses a entropy-decoding method (Marpe: column 17, lines 12-35) which includes the use an initialization step (Marpe: column 6, lines 52-68; column 7, lines 1-20) to initialize (i.e. renormalize) symbols of CABAC methods (Marpe: column 13, lines 35-60) in order to achieve a bit rate savings over straightforward equi-probable symbol distribution. Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the Marpe teaching of initialization into the Au method

in order to achieve additional bit rate savings in the Au method. The Au method, now incorporating Marpe's initialization step, has all of the features of claim 16.

Regarding claim 17, the Au method, now incorporating Marpe's initialization step, has using predetermined bit patterns comprising (Au: column 12, lines 50-55) a mode for non-encoded pulse code modulated data (Au: column 10, lines 1-22), as in the claim.

Au discloses a method for encoding a bitstream (Au: column 11, lines 10-32), comprising the steps of: (A) generating a first signal and a second signal by parsing (Au: column 8, lines 65-67; column 9, lines 1-10) a common slice in said bitstream (Au: column 8, lines 35-40); generating a third signal by entropy encoding said first signal (Au: column 10, lines 5-20); and generating a video signal by combining said second signal and said third signal (Au: column 10, lines 60-67), as in claim 19. However, Au fails to disclose the use of a demodulator for demodulating said second signal wherein the demodulator is configured for pulse code demodulating, as in the claim. Marpe discloses the use of pulse code modulation and corollary demodulation in the decoder (Marpe: column 10, lines 1-17) in order to accurately represent anomalous picture content without significant data expansion. Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the Marpe teaching of pulse code modulation and demodulation into the Au apparatus in order to accurately represent anomalous picture content without significant data expansion. The Au apparatus, now incorporating the Marpe teaching of pulse code modification and demodulation, has all of features of claim 19.

Au discloses a method for decoding a bitstream (Au: figures 5-6), comprising the steps of: (A) generating a first signal and a second signal by parsing (Au: column 11, lines 5-10) a

common slice in said bitstream (Au: column 8, lines 35-40); (B) generating a third signal by entropy decoding said first signal (Au: column 11, lines 10-25); and (C) generating a video signal by combining said second signal and said third signal (Au: column 10, lines 60-67); accepting said common slice containing a plurality of macroblocks (Au: column 8, lines 35-45) encoded in a plurality of modes (Au: column 8, lines 55-65), wherein said common slice comprises one or more macroblocks encoded using arithmetic entropy encoding comprising context based arithmetic adaptive binary arithmetic coding (Au: column 11, lines 10-25), as in the claims 21-22. However, However, Au fails to disclose the use of pulse code modulation, as in the claim. Marpe discloses the use of pulse code modulation (Marpe: column 10, lines 1-17) in order to accurately represent anomalous picture content without significant data expansion. Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the Marpe teaching of pulse code modulation into the Au method in order to accurately represent anomalous picture content without significant data expansion. The Au method, now incorporating the Marpe teaching of pulse code modification, has all of features of claims 21-22.

Regarding claim 23, the Au apparatus, now incorporating the Marpe teaching of pulse code modification and demodulation, is further configured to pulse code demodulate said second signal in a first mode and pass said second signal in a second mode (Marpe: column 10, lines 13-17: "directly send"), as in the claim.

Au discloses a method for encoding a bitstream (Au: column 11, lines 10-32), comprising the steps of: (A) generating a first signal and a second signal by parsing (Au: column 8, lines 65-67; column 9, lines 1-10) a common slice in said bitstream (Au: column 8, lines 35-40);

generating a third signal by entropy encoding said first signal (Au: column 10, lines 5-20); and generating a video signal by combining said second signal and said third signal (Au: column 10, lines 60-67), wherein said common slice comprises one or more macroblocks encoded using arithmetic entropy encoding comprising context based arithmetic adaptive binary arithmetic coding (Au: column 11, lines 10-25), as in the claim 24. However, However, Au fails to disclose the use of pulse code modulation, as in the claim. Marpe discloses the use of pulse code modulation (Marpe: column 10, lines 1-17) in order to accurately represent anomalous picture content without significant data expansion. Accordingly, given this teaching, it would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the Marpe teaching of pulse code modulation into the Au method in order to accurately represent anomalous picture content without significant data expansion. The Au method, now incorporating the Marpe teaching of pulse code modification, has all of features of claim 24.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tourapis discloses a timestamp independent motion vector prediction for predictive and bidirectionally predictive pictures using a CABAC entropy coding methods. Kobayashi discloses a signal encoding method, signal decoding method, signal encoding apparatus, and etc.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

asr
October 10, 2007